

Abstract of the Disclosure:

A laser module can be used with optical transmission systems and a method stabilizes an output wavelength of the laser module. Devices are provided for stabilizing an output  
5 wavelength of the laser module; the devices have a measurement apparatus for measuring the photon density within the resonator, an adjustment apparatus for adjusting the effective optical path length of the resonator, and a control apparatus that, based on a comparison between different values of the  
10 photon density at the different effective optical path lengths of the resonator, produces control commands to the adjustment apparatus to adjust the effective optical path length of the resonator to equal the emitted output wavelength to a desired wavelength. The wavelength of a semiconductor laser can be  
15 set precisely to a desired wavelength irrespective of the age and ambient temperature.

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